**Pulled From The Past Ecology**

2.1.1 Distinguish between biotic and abiotic (physical) components of an ecosystem  
  
2.1.2 Define the term trophic level  
  
2.1.3 Identify and explain trophic levels in food chains and food webs selected from the local environment  
  
2.1.4 Explain the principles of pyramids of numbers, pyramids of biomass, and pyramids of productivity, and construct such pyramids from given data  
  
2.1.5 Discuss how the pyramids structures affect the functioning of an ecosystem  
  
2.1.6 Define the terms species, population, habitat, niche, community, and ecosystem with reference to local examples  
  
2.1.7 Describe and explain population interactions using examples of named species

🡪Define Species, Population, Community, Ecosystem, Biome, Biosphere

🡪Define niche (aka ecological niche)

🡪Define and give specific examples of mutualism, parasitism, commensalism, and competition

🡪Define biomass

🡪Define producer, primary consumer, secondary consumer, tertiary consumer

🡪Define herbivore, omnivore, and carnivore. Give examples of each

🡪Define NPP, GPP, NSP, GSP, and R

🡪Describe and evaluate a strategy for determining plant biomass

🡪What information do you need in order to determine each of the following: NPP, GPP, NSP, & GSP

🡪Explain and evaluate a method for estimating the number of plants in a field; the number of caterpillars in a front yard

🡪Explain how you would create a dichotomous key (practice with the shoes in your closet)

🡪Name and describe an ecosystem you have studied

🡪Define and give examples of abiotic factors

🡪Explain how you can measure three abiotic factors in an ecosystem

🡪Define environmental gradient

🡪Define trophic level

🡪Describe the productivity, insulation, precipitation, and flora and fauna of the following biomes: desert, tundra, tropical rainforest, and temperate deciduous rainforest

🡪State the limiting factors for each of the biomes we have studied

🡪Define and explain primary productivity

🡪Analyze a food web

🡪Calculate Simpson’s Diversity Index for given data

🡪Define food chain and food web

🡪For a named ecosystem draw a food chain with named species, label the trophic levels

🡪Compare predators and parasites

🡪Analyze pyramids of productivity, pyramids of numbers, and pyramids of biomass

🡪Explain why food chains are limited in length

🡪Explain why the energy that is taken in by predators is always smaller than the energy made by producers

🡪Explain how you would measure changes along an environmental gradient

🡪State two functions of producers in an ecosystem

🡪Describe how populations of individual species interact within an ecosystem, use named examples to support your answers

🡪Calculate population density

🡪Explain and calculate population size using Lincoln Index

🡪Distinguish between diversity and abundance

🡪Compare primary productivity and secondary productivity

🡪Give three reasons why some biomes and more productive than others

🡪State an example of a flow in an ecosystem

🡪State an example of a storage in an ecosystem

🡪What are the characteristics of an ecosystem that would allow it to support a high biodiversity?

🡪Distinguish between herbivores and predators

🡪For each type of ecological pyramid studied, state what can’t be determined from each.

🡪Compare the three types of ecological pyramids we have studied

🡪If a chemical or pesticide was introduced into an ecosystem, in which trophic level would you expect to find it at the highest concentration? Explain your answer.

🡪Describe keystone species and give examples

🡪Compare and contrast density-dependent limiting factors and density-independent limiting factors; give examples of each